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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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EXAMINER

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ART UNIT

PAPER NUMBER

2684

DATE MAILED:

07/02/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/219,199

Applicant(s)

KRANS MO ET AL.

Examiner

Yemane Woldetatos

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2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-8,11,13-21,23,24,27-32,34,36-44 and 46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-8,11,13-21,23,24,27-32,34,36-44 and 46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 18) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 8, 20, 31 and 43 are rejected under 35 U.S.C. 102(e) as being anticipated by Camp, Jr. et al. (6075987).

Claims 8, 20, 31 and 43. Camp discloses in a wireless telecommunications system having a Base Transceiver Station and a mobile terminal equipped with a Global Positioning System (GPS) equipped receiver, the Base Transceiver Station having operational control of the GPS-equipped mobile terminal, a method for determining the approximate position of the GPS-equipped mobile terminal, said method comprising the steps of:

demodulating signals received from a multiplicity of GPS satellites at a reference GPS receiver, said reference GPS receiver being connected to the wireless telecommunications system and having a determinate physical location relative to the base transceiver station (BTS) (col. 8 lines 38-59);

recovering respective navigational data signals from each of said demodulated GPS signals (col. 8 lines 50-59);

determining whether the GPS signal strength at the GPS-equipped mobile terminal is adequate to permit initialization of the GPS receiver associated with the GPS-equipped mobile terminal within a desired response time (col. 6 lines 38-44);
if not, originating a request for approximate navigational information from the GPS-equipped mobile terminal to the Base Transceiver Station (col. 6 lines 47-53);
transmitting recovered navigational data signals to the GPS-equipped mobile terminal responsive to said request for approximate navigational information (col. 6 lines 6-15); and
determining, within said GPS-equipped mobile terminal, and from said transmitted navigational data signals, the approximate location of the GPS-equipped mobile terminal (col. 6 lines 15-26).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 4-7, 13-19, 23, 24, 27-30, 36, 38-42 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Camp, Jr. et al. (6075987) and in view of Denninger (5952961).

Claims 1, 13, 14, 24 and 36. Camp discloses in a wireless telecommunications system having a Base Transceiver Station and a mobile terminal equipped with a Global Positioning System (GPS) equipped receiver, the Base Transceiver Station having operational control of the GPS-equipped mobile terminal, a method for determining the approximate position of the GPS-equipped mobile terminal, said method comprising the steps of:

demodulating signals received from a multiplicity of GPS satellites at a reference GPS receiver, said reference GPS receiver being connected to the wireless telecommunications system and having a determinate physical location relative to the base transceiver station (BTS) (col. 4 lines 8-19);

recovering respective navigational data signals from each of said demodulated GPS signals (col. 4 lines 8-23);

originating a request for approximate navigational information from the GPS-equipped mobile terminal to the Base Transceiver Station (col. 5 line 64 to col. 6 line 5);

transmitting recovered navigational data signals to the GPS-equipped mobile terminal responsive to said request for approximate navigational information (col. 6 lines 6-15); and

determining, within said GPS-equipped mobile terminal, and from said transmitted navigational data signals, the approximate location of the GPS-equipped mobile terminal (col. 6 lines 15-26).

Camp fails to disclose, wherein the GPS satellite signals comprise one of:

Standard Positioning Service signals received on an L1 frequency, said L1 frequency being centered at about 1575.42 MHz; or Precise positioning Service signals received on an L2 frequency, said L2 frequency being centered at about 1227.60 MHz. However, Denninger teaches the L1 and L2 frequencies as stated above (col. 3 lines 22-27). Therefore, it would have been obvious to one of ordinary skill in the art to modify Camp by Denninger, by using the specific frequencies for the standard and precision positioning service in order to standardize the communications network.

Claims 4, 15, 27 and 38. Camp discloses the method, wherein said approximate navigational information comprises the identities of a plurality of GPS satellites within ranging distance, the orbital parameters associated with said plurality of GPS satellites, clock correction information and differential correction information associated with said plurality of GPS satellites (col. 15 lines 16-37).

Claims 5, 6, 17, 18, 28, 29, 40 and 41. Camp discloses the method, wherein said step of originating said request for approximate locational information from the GPS-equipped mobile terminal to the Base Transceiver Station is responsive to activation of the mobile terminal (col. 6 lines 6-15).

Claim 7, 19, 30 and 42. Camp as modified by Denninger discloses the method, wherein said one designated number is associated with an emergency service (col. 6 lines 26-28).

Claims 16 and 39. Camp discloses the method according to Claim 13, wherein said method further comprises, after said step of computing and before said step of originating, the step of storing said estimated location of said reference GPS receiver in said wireless telecommunications system (col. 6 lines 6-15).

Claims 23 and 46. Camp discloses the method wherein the estimated location of the reference GPS receiver is used as the approximate location of the GPS-equipped mobile terminal (col. 5 lines 39-49).

5. Claims 9, 21, 32, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Camp in view of Duffett-Smith et al. (6094168).

Claims 9, 21, 32 and 44. Camp discloses in a wireless telecommunications system having a Base Transceiver Station and a mobile terminal equipped with a Global Positioning System

(GPS) equipped receiver, the Base Transceiver Station having operational control of the GPS-equipped mobile terminal, a method for determining the approximate position of the GPS-equipped mobile terminal, said method comprising the steps of:

demodulating signals received from a multiplicity of GPS satellites at a reference GPS receiver, said reference GPS receiver being connected to the wireless telecommunications system and having a determinate physical location relative to the base transceiver station (BTS) (col. 4 lines 8-19);

recovering respective navigational data signals from each of said demodulated GPS signals (col. 4 lines 8-23);

originating a request for approximate navigational information from the GPS-equipped mobile terminal to the Base Transceiver Station (col. 6 lines 47-53);

transmitting recovered navigational data signals to the GPS-equipped mobile terminal responsive to said request for approximate navigational information (col. 6 lines 6-15); and

determining, within said GPS-equipped mobile terminal, and from said transmitted navigational data signals, the approximate location of the GPS-equipped mobile terminal (col. 6 lines 15-26).

Camp fails to disclose wherein said step of transmitting is performed via one of:

a Cell Broadcast Short message service message of the wireless telecommunications system; or a Broadcast Control Channel of the wireless telecommunications system. However, Duffett-Smith teaches transmitting via a cell broadcast short message service or broadcast control channel (col. 8 lines 29-33 and col. 7 lines 41-46). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Camp by Duffett-

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Smith, by transmitting signals via cell broadcast short message service message or broadcast control channel in order to keep the network with updated information even during quiescent period.

6. Claims 11, 34 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Camp in view of Hermansson et al. (5987319).

Claims 11, 34 and 37. Camp discloses in a wireless telecommunications system having a Base Transceiver Station and a mobile terminal equipped with a Global Positioning System (GPS) equipped receiver, the Base Transceiver Station having operational control of the GPS-equipped mobile terminal, a method for determining the approximate position of the GPS-equipped mobile terminal, said method comprising the steps of:

demodulating signals received from a multiplicity of GPS satellites at a reference GPS receiver, said reference GPS receiver being connected to the wireless telecommunications system and having a determinate physical location relative to the base transceiver station (col. 4 lines 8-19);

recovering respective navigational data signals from each of said demodulated GPS signals (col. 4 lines 8-23);

originating a request for approximate navigational information from the GPS-equipped mobile terminal to the Base Transceiver Station (col. 6 lines 47-53);

transmitting recovered navigational data signals to the GPS-equipped mobile terminal responsive to said request for approximate navigational information (col. 6 lines 6-15); and

determining, within said GPS-equipped mobile terminal, and from said transmitted navigational data signals, the approximate location of the GPS-equipped mobile terminal (col. 6 lines 15-26);

Camp discloses means for updating the real time clock at the user terminal (col. 10 lines 33-37). Camp does not specifically mention periodically transmitting a timing advance parameter from the base transceiver station to the GPS-equipped mobile terminal to dynamically compensate for varying distances between the GPS-equipped mobile terminal and the base transceiver station; and refining said approximate location of the GPS-equipped mobile terminal using said timing advance parameter. However, Hermansson teaches transmitting a timing advance parameter (col. 5 lines 11-16). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Camp by Hermansson by adding means for transmitting a time advance parameter in order to update mobile terminal's location information.

Response to Amendment

7. The amendment filed on 6-11-01 has been considered but is ineffective to overcome the cited reference.

After a thorough searching and analysis, the previous decision on the dependent claims 2, 3, 25 and 26 which are currently canceled and being amended into independent claims 1, 13, 24 and 36 are found to be obvious and unallowable against the newly cited references. Therefore, the examiner has reversed the previous "final action" decision.

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Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wortham (5913170), Mullen (5872539), Lewis (5796365) and Krasner (6150980 and 5841396) teach method and system for determining position of a cellular mobile terminal using GPS system in a mobile satellite communication networks.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yemane Woldetatos whose telephone number is 703-308-9596. The examiner can normally be reached on Monday thru Friday: 9-18:30, off 1st Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Hunter can be reached on 703-308-6732. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-6306 for regular communications and 703-308-6296 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

Yemane Woldetatos
Examiner
Art Unit 2684



yw
June 25, 2001



DANIEL HUNTER
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